

## ABSTRACT

The present invention applies to the surveillance of, in particular civil, air traffic, and more particularly, to cooperative aircraft ground systems which make it possible to  
5 pinpoint in radial distance and in azimuth the aircraft present in a certain volume and to interrogate them. The invention makes it possible to determine a reference value of a response contained in a reception signal of a secondary radar, doing so even in the presence of strong pollution, in particular in the event of nesting between mode S responses. For this purpose the position of the pulses present is tagged in the reception signal;  
10 potential positions of pulses of the response considered are determined; time windows are selected, each time window tagging in the reception signal a stable part of a pulse whose position has been tagged and whose tagged position coincides with a determined potential position, the reference value being the value taken predominantly by samples of the reception signal, these samples being situated in the selected time windows.